

Discussion and Remarks

The applicant believes that he is confused about the numeral (24) stated in the Examiner's report. In the report, line 5, paragraph 5, Pg. 3 states that,

“an enclosure for surrounding the crawl path (24)”,

the applicant is not sure if the numeral (24) is referring to the enclosure or the crawl path. The applicant may have mistaken about the meaning of the numeral (24) in the report.

In the cited references, Wilson (6,158,165) discloses an insect trap comprising an aperture (at 19), a tube with a conical part (24) and a plurality of interleaving wires (21), as shown in his Fig. 5 posted to the right side of this paragraph.

The interleaving wires (21), line 28, Pg. 3 (Wilson), are configured with the wires criss-crossing at a converging point before diverging out into the chamber as shown in Fig. 5. A plurality of gaps exists between the wires (21) and the insect may push aside the wires to enter the chamber. Wilson states in his Abstract (lines 9-10, First page), that

“Insects can push aside the wires in one direction to enter the container.”

The insects entering the Wilson's device would have to push aside the wires to enter the trapping chamber. There are gaps between the interleaving wires (21) in the Wilson's device. Wilson expects one of the gaps to become bigger as the insect pushes the interleaving wires (21) in order to enter the trapping chamber. The gap cannot be said to open from an already open position when the insect pushes aside the wires (21). The gap does not return to a closed position after the insect has departed

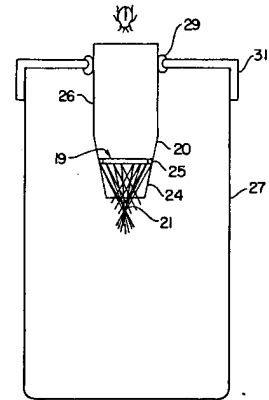


FIG. 5

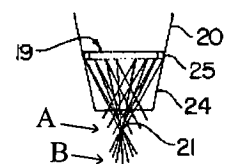
from the interleaving wires (21), because the gaps would still be there between the interleaving wires (21) in the Wilson's device .

Gaps have not been introduced into the applicant's device from the aperture to the end of the passageway. In the Wilson's device, an insect would have to select one of the gaps between the interleaving wires (21) and to squeeze itself into the trapping chamber.

In the applicant's device, the insect lands on a crawl path (420). An opening is created at the end of the passageway when the deflectable strips deflect downwardly (Fig. 2). The opening becomes bigger as the insect crawls along the crawl path (420). The insect departs from the opening and the crawl path (420) returns to its original closed position with the enclosure. The passageway in the Wilson's device is not completely closed, the gaps are already there between the interleaving wires (21), while the applicant's device provides a crawl path (420) enclosed by a completely closed enclosure.

The diagram on the right is a partial view of Wilson's Fig. 5.

In the Wilson's device, the interleaving wires (21) converge at a point A before diverging out near the region B as shown in the diagram. The insects usually have more than four legs, or at least one on each side of the body. The insect would have to



Wilson's Fig. 5 (part)

crawl along at least two of the interleaving wires (21), or standing on more than two wires near the end point A in the Wilson's device. Since the interleaving wires (21) are criss-crossing at each other at point A, the interleaving wires (21) are interlocking at point A and the wires (21) are biased against each other at the end point A. Wilson has not anticipated that there would be an opening at the end of the

insect's crawl path, which is the converging end point A in Fig. 5. The configuration about the interleaving wires (21) can be verified from Fig. 5 as shown above and the statements made in the Wilson's patent (6,158,165), lines 31-33, Pg. 3, which states that,

“Fig. 3 displays the inverted resilient ring (23) and wires (21) biased into the interleaving configuration by engagement of the retaining ring (25).”

As shown in Fig. 5 of the Wilson's patent, the conical part (24) of the tube is the enclosure enclosing a plurality of large gaps which have already existed between the interleaving wires (21). The conical part (24) does not extend to enclose the converging end point A which is the end of the insect's crawl path. The Wilson's enclosure closes prematurely before the end of the insect's crawl path. In the applicant's device, the amended claims have specified that the enclosure closes at a distal end of the crawl path (420).

The insect makes a forced pass-through through the smaller gaps between the interleaving wires (21) in the region extending from the end of the conical part (24) to the converging end point A as shown in Fig. 5 above.

In the instant application, the opening created by the landing of the insect and the subsequent increases in the size of the opening by the insect's continued crawling have not been anticipated by Wilson. The anticipation by Wilson is a basis of objection specified in the Examiner's report. It is illustrated above that Wilson has expected the insect to enlarge the gap between the interleaving wires (21) by pushing aside the wires to enter the chamber. Wilson has not anticipated a gradual opening at the end point A in his Fig. 5 when the insect continues to crawl along the interleaving wires (21).

Moreover, the use of the interleaving wires (21) to configure a passageway for an insect to crawl is very different from the applicant's device which uses an enclosure enclosing a crawl path (420) which is responsive to the actions of the incoming insect in different stages. The stages are the landing, crawling and the subsequent departure of the insect from the end of the crawl path (420).

Wilson has not anticipated a separate (and a responsive) crawl path which would change in its relationship with the enclosure upon the landing of the insect, the crawling and the subsequent departure of the insect from the crawl path (420). Wilson's device provides the gaps between the interleaving wires (21) for a forced pass-through by the insect into the chamber.

The device in the instant application is an improvement over the prior art. The Wilson's device is not properly configured to have the same features as disclosed in the instant application. Wilson has not disclosed in detail how the interleaving wires (21) should be arranged to have a crawl path which would be separated from the enclosure. The deficiencies of the prior art device are overcome in the instant application which has outlined the finest detail in the configuration that has not been anticipated by Wilson in his patent (6,158,165).

It is noted that the interleaving wires (21) have been specified to be used in the Wilson's device and Wilson has configured the interleaving wires (21) with gaps between the wires. The gaps would become smaller near the end point A, as the interleaving wires (21) converge at point A in Fig. 5 as shown above. Wilson's configuration is not equivalent to a separate (and responsive) crawl path with a completely closed enclosure which is disclosed in the instant application. The device in the instant application is an improvement over the prior art device. The applicant's device is easy to configure to provide a closed system which would forbid the trapped insect

from escaping.

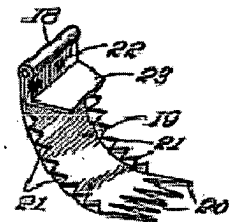
In view of the above mentioned structural differences in the configuration and the unique operating characteristics of the applicant's device, amended independent Claim 60 has been rewritten to replace Claim 41. The amended independent Claim 60 discloses the operations of the device in sufficient detail to distinguish the applicant's device from the operations disclosed by Wilson in his patent.

An amended Claim 61, which is proposed to replace Claim 42, is written to be a dependent claim of Claim 60.

Amended Claim 62, which is a claim to replace Claim 43, points to a non-elected species. The applicant would like to appeal for a delay in the consideration of amended Claim 62, which has been written as a dependent claim of amended Claim 60, on the contingent of the completion in the examination of Claim 60.

Claims 44 and 52 are rejected by the Examiner under 35 U.S.C. §103(a) as being unpatentable over Wilson in view of Earwood (1,655,361). It is shown below that the teeth (21) and the tines (100) behave differently in their devices. Their roles and the capacity to achieve desirable results vary and they are unique in their devices.

The figure on the right shows the teeth (21) used in Fig. 6 of the Earwood's device. The teeth (21) in the Earwood's device are mounted along two opposite lateral sides of an arcuate shaped drop (19). The teeth (21) in the Earwood's device, are saw-like elements which have a flat and a much broader surface area on both sides of each tooth. A trapped insect could grab onto the sides of the teeth (21) and moves from one tooth to another.



The diagram shown on the right is a plurality of tines (100) in Fig. 2 of the instant application. The sharp tines (100) are mounted to the underside of the deflectable strips. The tines (100) in the instant application are filament-like elements with a sharp tapered end at the end of each tine. It would be difficult for a trapped insect to maintain a steady hold to the thin and rounded filament-like tines (100).

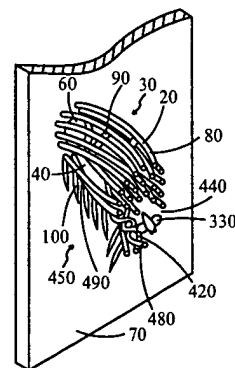


Figure 2

Furthermore, the thin sharp tines (100) are light and they could be bent easily in all directions by the weight and actions of the trapped insect. The tine onto which the insect grabs momentarily could swing in the opposite direction away from the neighboring tines (100) to which the trapped insect intends to reach. The disturbed tines (100) could undergo a continuing harmonic motion, thus further frustrating the trapped insect.

The saw-like teeth (21) in the Earwood's device could at most bend to one side from their original position. The bending amplitude is limited as the disturbed tooth is connected to its neighboring teeth. The disturbance energy could be quickly dissipated by other neighboring teeth.

In the applicant's device, it would be harder for the trapped insect to move from one tine to the next, as the tines (100) are independent and are mounted individually to the undersides of the enclosure. The tines (100) which are disturbed could move into other un-predictable directions. The saw-like teeth (21) in the Earwood's device have a well defined configuration. The whole row of teeth (21) would act together and the teeth (21) are limited in their motion, when one of the saw-like teeth (21) is disturbed by the trapped insect.

If the teeth (21) were to be deployed in the applicant's device, the saw-like teeth (21) in the Earwood's device would provide flat and broad landing area on the sides of the teeth to the trapped insect. The trapped insect could grab hold of the flat landing area on the sides of the teeth (21) and moves from one tooth to another. The saw-like teeth (21) in the Earwood's device are not suitable for use in the instant application.

The tines (100) disclosed in the instant application could swing during the disturbances by the trapped insect. The use of the tines (100) in the instant application is advantageous over the teeth (21) of the Earwood's device.

Amended Claims 63 and 71, which are proposed to replace respectively Claim 44 and Claim 52, include a plurality of tines (100). As stated above, the tines (100) have advantages over the teeth (21). The thin filament-like, individually mounted tines (100) and the saw-like teeth (21) are different in their behaviors as explained above.

Amended dependent Claims 64, 65, 66 and 69, which correspond to the Claims 45-47 and 50, belong to a non-elected species. The applicant requests a delay in the consideration of Claims 64, 65, 66 and 69, until the completion in the examination of Claim 60.

The Examiner rejects Claim 48 as being unpatentable over Wilson in view of Harwoods (4,244,135). Harwoods has used a slidable tray containing an attractant. A proposed dependent Claim 67, which is to replace Claim 48, is written as a dependent claim of Claim 60. The independent Claim 60 has a separate (and responsive) crawl path enclosed by a completely closed enclosure that would not have required an insect to make a forced pass-through into the trapping chamber, as stated in the statements for amended Claim 60 above.

The Examiner rejects Claims 49 and 55 as being unpatentable over Wilson in view of Walker (5,896,695). Walker has taught the use of a cross-wired mesh cover for placement over a tray. Dependent Claim 68 and an independent Claim 75 are respectively the proposed replacements for Claim 49 and Claim 55. Amended Claims 68 and 75 are dependent upon Claim 60, which has a separate (and responsive) crawl path enclosed by a completely closed enclosure that would not have required an insect to make a forced pass-through into the trapping chamber, as stated in the statements for amended Claim 60 above.

The Examiner rejects Claim 51 as being unpatentable over Wilson in view of Ridings (3,996,690). Ridings has taught the use of a hollow cartridge containing sticky material for the attraction of insects. A proposed amended Claim 70, which is to replace Claim 51, is a dependent claim of Claim 60. The independent Claim 60, as stated above, has a separate (and responsive) crawl path enclosed by a completely closed enclosure that would not have required an insect to make a forced pass-through into the trapping chamber.

The applicant requests a delay in the consideration of the proposed dependent Claim 72 and Claim 73, which are to replace Claims 53-54, until the completion in the examination of the amended independent Claim 71 as stated above.

A new dependent Claim 74, which is a former Claim 27, belongs to a non-elected species and is dependent on Claim 71. The applicant requests a delay in the consideration of the proposed dependent Claim 74, until the completion in the examination of the amended independent Claim 71 as stated above.

Claim 56 was rejected as being unpatentable over Wilson in modified form in view of Earwood (1,655,361). As explained with regard to the Claims 44 and 52 above, and with the aid of the diagrams as shown above, it is shown that the use of

the tines (100) is advantageous over the teeth (21) of the Earwood's device. If the teeth (21) were to be deployed in the applicant's device, the teeth (21) would have provided landing areas on the sides of the teeth (21) to the trapped insect.

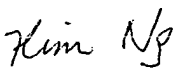
Amended Claim 76, which is proposed to replace Claim 56, includes a plurality of tines (100). Amended Claim 76 is a dependent claim of Claim 75. Claim 75, in turns, depends on Claim 60, which has a separate (and responsive) crawl path enclosed by a completely closed enclosure that would not have required an insect to make a forced pass-through into the trapping chamber as stated above.

Amended Claims 77, 78 and 79, which are to replace Claims 57-59, belong to a non-elected species. The amended Claims 77, 78 and 79 are dependent claims of amended Claim 75. The applicant requests a delay in the consideration of amended Claims 77, 78 and 79, until the completion in the examination of amended Claim 75.

The claims have been amended to include the structural elements and their operating characteristics. The applicant submits herewith a proposed amendment to the claims to reflect the distinct characteristics of the improved device.

For the above reasons, the applicant appeals for reconsideration on the merits of the instant application. The applicant requests an entry and consideration of the amendment submitted herewith.

Respectfully submitted,



Kim Kwee Ng

Date: 5/22/2006
10 Malibu Ln
Centereach, NY 11720-3042
Tel. (631) 632 - 8189
Fax. (631) 632 - 8101

Current Status of all Claims:

Claims 1-20 (Canceled)

Claims 21-40 (Canceled)

Claims 41-59 (Canceled)

Claims 60-61 (New)

Claims 62 (New)

Claims 63 (New)

Claims 64-66 (New)

Claims 67-68 (New)

Claims 69 (New)

Claims 70-71 (New)

Claims 72-73 (New)

Claims 74 (New)

Claims 75-76 (New)

Claims 77-79 (New)